



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re application of:

Sorrells *et al.*

Appl. No. 09/525,185

Filed: March 14, 2000

For: **Spread Spectrum Applications  
of Universal Frequency  
Translation**

Art Unit: 2634

Technology Center 2600

Examiner: Dac V. Ha

Atty. Docket: 1744.0450002

**Second Supplemental Information Disclosure Statement**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Listed on accompanying PTO-1449 form are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98. The numbering on this Second Supplemental Information Disclosure Statement is a continuation of the numbering in Applicants' Supplemental Information Disclosure Statement filed on October 9, 2002 in connection with the above-captioned application.

Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

Applicants provide the following comments regarding the documents:

Documents AG51, AH51, AD52, AH54 and AG55 are co-owned patents which are directed to related subject matter.

Document AF51 was cited in an Office Action in related U.S. Patent Application Serial No. 09/476,092, filed January 3, 2000, entitled "Analog Zero IF FM Decoder and Embodiments Thereof, Such as the Family Radio Service," directed to related subject matter. Also cited in the Office Action were U.S. Patent Nos. 5,600,680 and 5,606,731, which have already been cited in the present application in the Supplemental Information Disclosure Statement, filed October 9, 2002.

Documents AL19, AM19 and AB0 were cited in an International Search Report in related PCT Appl. No. PCT/US01/08969, filed March 22, 2001, entitled, "Integrated Frequency Translation and Selectivity with a Gain Control Functionality, and Applications Thereof," directed to related subject matter. Also cited in the International Search Report were U.S. Patent Nos. 4,888,557 and 5,801,654, and PCT Publication Nos. WO 96/02977 and WO 96/39750, which have already been cited in the present application in the Information Disclosure Statement, filed April 19, 2002.

Document AC50 was cited in an Office Action in related U.S. Patent Application Serial No. 09/376,509, filed August 18, 1999, entitled "Method and System for Ensuring Reception of a Communications Signal," directed to related subject matter.

Documents AD50-AF50, AH50, AA51 and AD51 were cited in an Office Action in related U.S. Patent Appl. No. 09/476,330, filed January 3, 2000, entitled, "Multi-Mode, Multi-Band Communication System," directed to related subject matter.

Document AG50 was cited in an Office Action in related U.S. Patent Appl. No. 09/567,963, filed May 10, 2000, entitled, "Frequency Synthesizer Using Universal Frequency Translation Technology," directed to related subject matter.

Documents AI50, AB51 and AC51 were cited in an Office Action in related U.S. Patent Appl. No. 09/526,041, filed March 14, 2000, entitled, "DC Offset, Re-radiation, and I/Q Solutions Using Universal Frequency Translation Technology," directed to related subject matter.

Documents AI51 and AN58-AP58 were cited in an Office Action in related U.S. Patent Appl. No. 09/567,977, filed May 10, 2000, entitled, "Optical Down-converter Using Universal Frequency Translation Technology," directed to related subject matter.

Documents AC52 and AJ23 were cited in an Invitation to Pay Additional Fees in related PCT Appl. No. PCT/US01/43077, filed November 14, 2001, entitled "Method and Apparatus for a Parallel Correlator and Applications Thereof," directed to related subject matter.

Documents AE52-AH52 were cited in an Office Action in related U.S. Patent Application No. 09/986,764, filed November 9, 2001, entitled "Method and Apparatus for Reducing DC Offsets in a Communication System," directed to related subject matter.

Documents AI52 and AA53-AC53 were cited in an International Search Report in related PCT Application No. PCT/US02/35861, filed November 8, 2002, entitled "Method and Apparatus for Reducing DC Offsets in a Communication System," directed to related subject matter.

Documents AD53-AI53 and AA54 were cited in an Office Action in related U.S. Patent Application No. 09/476,093, filed January 3, 2000, entitled "Family Radio System with Multi-Mode and Multi-Band Functionality," directed to related subject matter.

Documents AB54-AE54 were cited in an International Search Report in related PCT Application No. PCT/US03/16403, filed May 27, 2003, entitled "Method and Apparatus for DC Offset Removal in a Radio Frequency Communication Channel," directed to related subject matter.

Documents AF54 and AG54 were cited in an Office Action in related U.S. Patent Application No. 09/550,642, filed April 14, 2000, entitled "Method and System for Down-converting an Electromagnetic Signal, and Transforms for Same," directed to related subject matter.

Documents AI54 and AA55-AD55 were cited in an Office Action in related U.S. Patent Application No. 09/548,923, filed April 13, 2000, entitled "Method and System for Frequency Conversion with Modulation Embodiments," directed to related subject matter. Also cited in the Office Action were U.S. Patent Nos. 6,091,940 and 6,353,735, which have already been cited in the present application in the Information Disclosure Statement, filed April 19, 2002.

Documents AE55 and AF55 were cited in an Office Action in related U.S. Patent Application No. 09/543,867, filed April 5, 2000, entitled "Automated Meter Reader Applications of Universal Frequency Translation," directed to related subject matter.

Document AJ20 was cited in an Office Action in related Japanese Patent Application Serial No. 2000-577,764, filed June 21, 2000, entitled "Applications of Universal Frequency Translation," directed to related subject matter. Also cited in the Office Action was

Japanese Patent Publication No. 58-133004, which has already been cited in the present application in the Information Disclosure Statement, filed April 19, 2002.

Documents AK20, AL20, AJ21, AK21, AL21, AP56 and AQ56 were cited in an International Search Report in related PCT Appl. No. PCT/US01/12086, filed April 13, 2001, entitled, "Frequency Converter," directed to related subject matter. Also cited in the Office Action was U.S. Patent No. 5,844,449, which has already been cited in the present application in the Information Disclosure Statement, filed April 19, 2002.

Documents AM21 and AJ22 were cited in an Office Action in related Japanese Patent Application No. 2000-577,765, filed June 21, 2000, entitled "Method and System for Ensuring Reception of a Communications Signal," directed to related subject matter. Also cited in the Office Action were Japanese Patent Publication Nos. 56-114451, 8-32556 and 8-139524, which have already been cited in the present application in the Information Disclosure Statement, filed April 19, 2002.

Documents AK22-AM22, AA52, AB52 and AQ58 were cited in an International Search Report in related PCT Appl. No. PCT/US01/15555, filed May 16, 2001, entitled, "Apparatus, System, and Method for Down-Converting and Up-Converting Electromagnetic Signals," directed to related subject matter. Also cited the International Search Report were U.S. Patent Nos. 4,888,557, 5,454,007, 5,640,698 and 5,705,949, and PCT Publication No. WO 96/02977, which have already been cited in the present application in the Information Disclosure Statement, filed April 19, 2002.

Document AK23 was cited in an Office Action in related Japanese Patent Application No. 2000-577,764, filed June 21, 2000, entitled "Applications of Frequency Translation," directed to related subject matter.

The other documents in the PTO-1449 do not fall within the above categories.

It is noted that some of these documents could be classified in more than one of the above categories.

This statement should not be construed as a representation that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

Applicants have checked the appropriate boxes below.

- 1. Statement under 37 C.F.R. 1.704(d). Each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this information disclosure statement.
- 2. Filing under 37 C.F.R. § 1.97(b). This Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits. No statement or fee is required.
- 3. Filing under 37 C.F.R. § 1.97(c). This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection, or Notice of Allowance, or an action that otherwise closes prosecution in the application.
  - a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).
  - b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a

communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

c. Attached is our PTO-2038 Credit Card Payment Form in the amount of \_\_\_\_\_ in payment of the fee under 37 C.F.R. § 1.17(p).

4. Filing under 37 C.F.R. § 1.97(d) This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but before payment of the Issue Fee. Attached is our PTO-2038 Credit Card Payment Form [OR] Check No. \_\_\_\_\_ in the amount of \$ \_\_\_\_\_ in payment of the fee under 37 C.F.R. § 1.17(p); in addition:

a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

5. The document(s) was/were cited in a search report by a foreign patent office in a counterpart foreign application. Submission of an English language version of the search report that indicates the degree of relevance found by the foreign office is provided in satisfaction of the requirement for a concise explanation of relevance. 1138 OG 37, 38.

■ 6. A concise explanation of the relevance of the non-English language documents appears below:

Document AJ20 (JP 60-130203) appears to describe a frequency converter. A copy of the English language abstract of document AJ20 is enclosed as document AO56.

Document AK20 (DE 196 27 640 A1) appears to describe a mixer. Document AK20 is a counterpart German application of U.S. Patent No. 5,680,078, which has already been cited in the present application in the Information Disclosure Statement, filed April 19, 2002.

Document AL20 (EP 0 087 336 A1) appears to describe a transistorized mixer for microwave transmitters. The granted version of document AL20 is cited as document AM20 (EP 0 087 336 B1) and contains an English-language version of the claims.

Document AK21 (FR 2 669 787 A1) appears to describe a symmetrical super high frequency mixer. A copy of the English-language abstract of document AK21 is enclosed as document AR56.

Document AM21 (JP 61-30821) appears to describe a squelch device. A copy of the English-language abstract of document AL21 is enclosed as document AP57.

Document AJ22 (JP 5-327356) appears to describe a frequency converter. A copy of the English-language abstract of document AJ22 is enclosed as document AQ57.

Document AK23 (JP 9-36664) appears to describe a frequency conversion circuit. A copy of the English-language abstract of document AK23 is enclosed as document AR58.

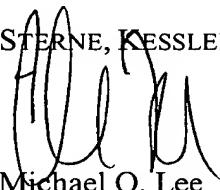
□ 7. Copies of the documents listed were submitted to the Patent Office in Information Disclosure Statements that comply with 37 C.F.R. § 1.98(a)-(c) in Application No. \_\_\_\_\_, filed \_\_\_\_\_, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).

It is respectfully requested that the Examiner initial and return a copy of the enclosed PTO-1449 form, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

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Date: 11/25/03

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November 25, 2003

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Technology Center 2600 Art Unit 2634

Re: U.S. Utility Patent Application  
Application No. 09/525,185; Filed: March 14, 2000  
For: **Spread Spectrum Applications of Universal Frequency Translation**  
Inventors: Sorrells *et al.*  
Our Ref: 1744.0450002

Sir:

Transmitted herewith for appropriate action are the following documents:

1. Second Supplemental Information Disclosure Statement;
2. Form PTO-1440 (6 pages) with (81) accompanying documents; and
3. Return postcard.

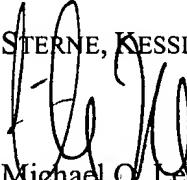
It is respectfully requested that the attached postcard be stamped with the date of filing of these documents, and that it be returned to our courier. In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

Commissioner for Patents  
November 25, 2003  
Page 2

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

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